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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,325	03/25/2004	Yusuke Mitsuya	009270-0308833	5419
909	7590	09/08/2005	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP			MORRISON, THOMAS A	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	

3653

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/808,325

Applicant(s)

MITSUYA ET AL.

Examiner

Thomas A. Morrison

Art Unit

3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 6-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05/25/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

1. Applicant's election without traverse of Species I (i.e., Figs. 1A-3C, directed to claims 1-5), in the reply filed on August 24, 2005 is acknowledged.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 4, it is unclear what is meant by the recited "an arm for depressing said shifting roller with pinch pressure **through** said forwarding roller." (emphasis added).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Publication No. 59-012029.

Regarding claim 1, Figs. 1-4 show an overlapped-sheet detection apparatus including

a conveying path (including 11) on which sheets are conveyed;

a forwarding roller (1) provided at the conveying path (including 11) to forward the sheets in a conveying direction (A);

a shifting roller (2) provided opposite to the forwarding roller (1) to shift the sheets back to a reverse direction (Fig. 3c) of the conveying direction (A) if the sheets are overlapped;

a motor (6) for supplying the shifting roller (2) with driving torque to shift the sheets back to the reverse direction (Fig. 3c) of the conveying direction (A);

a rotation detection unit (4 and 9) for detecting a rotation state of the shifting roller (2); and

a circuit (10) for judging from an output of the rotation detection unit (4 and 9) that the sheets are overlapped. Since the circuit (10) is connected to an encoder (4), it is highly suggestive that the circuit (10) uses a discriminator in order to detect frequency. See also English Abstract for description of frequency detection circuit (10). Accordingly, it would be obvious to one of ordinary skill in the art at the time the invention was made to use a discriminator for judging from an output of the rotation detection unit that the sheets are overlapped, as claimed.

4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Publication No. 59-012029 as applied to claim 1 above, and further in view of U.S. Patent No. 4,627,607 (Ishii). Japanese Publication No. 59-012029 discloses most of the limitations of claim 2, but does not show an arm arrangement as set forth in claim 2.

Figs. 1-2 of the Ishii patent show that it is well known to provide a sheet feeding system with an arm for depressing a forwarding roller (1) with pinch-pressure through a shifting roller (2), in which the arm has one end portion (near 23) provided at a rotation axis (near 14) of the shifting roller (2) and another end portion (near 7) rotationally provided at a fixed axis (7). Also, Figs. 1-2 of the Ishii patent show a spring (31) for rotating the arm around the fixed axis (7) to depress the shifting roller (2) against the forwarding roller (1) with the pinch-pressure in order for the forwarding roller (1) to cooperatively rotate the shifting roller (2) when the sheets are not overlapped. See, e.g., column 3, lines 59-65 of Ishii. The Ishii patent explains that this arm and spring arrangement has high reliability, because the force exerted by the shifting roller relative to the pressing force that the shifting roller applies to the forwarding roller is relatively constant over time. See, e.g., column 2, lines 24-36 of Ishii. It would have been obvious to one of ordinary skill in the art at the time the invention was made, to provide the apparatus of Japanese Publication No. 59-012029 with an arm and a spring, in order to maintain a relatively constant force over time, between the shifting roller and the forwarding roller, as taught by Ishii.

Regarding claim 3, providing an arm and spring arrangement on the apparatus of Japanese Publication No. 59-012029 would result in the arm transmitting driving torque to the shifting roller (2) of Japanese Publication No. 59-012029. See, e.g., column 3, lines 59-65 of Ishii.

5. Claims 4, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Publication No. 59-012029 as applied to claim 1 above,

and further in view of Japanese Publication No. 6-166446. Japanese Publication No. 59-012029 discloses most of the limitations of claim 4, but does not show an arm arrangement as set forth in claim 4.

Japanese Publication No. 6-166446 shows that it is well known to provide a sheet separation feeder with an arm (6) for depressing a shifting roller (2) with pinch-pressure through a forwarding roller (1), the arm (6) having one end portion (near 1a) provided at a rotation axis (1a) of the forwarding roller (1) and another end portion (near 7) rotationally provided at a fixed axis; (7) and a spring (8) for rotating the arm (6) around the fixed axis (7) to depress the forwarding roller (1) against the shifting roller (2) with the pinch-pressure. The English abstract explains that such an arrangement enables the forwarding roller (1) to act as a vibration roller in contact with the shifting roller (2). It would have been obvious to one of ordinary skill in the art at the time the invention was made, to provide the apparatus of Japanese Publication No. 59-012029 with an arm and a spring, in order so that the forwarding roller of Japanese Publication No. 59-012029 can act as a vibrating roller that is adequately held in contact with the shifting roller of Japanese Publication No. 59-012029, as taught by Japanese Publication No. 6-166446.

Allowable Subject Matter


6. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Walsh can be reached on (571) 272-6944. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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